

THE UNITED SHATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Monsanto Jechnology XXG

ALCONS, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY HARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY ON OFFERING IT FOR SALE, OR REPRODUCING IT, OR ORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

CORN, FIELD

'T325369'

In Testimonn Thereof, I have hereunto set my hand and caused the seal of the Plant Buriety Frotection Office to be affixed at the City of Washington, D.C. this twenty-fifth day of January, in the year two thousand and seven.

Allest:

Benjue

Commissioner Plant Variety Protection Office Aaricultural Marketina Service MK John Secretary of Agriculture

REPRODUCE LOCALLY. Include form number and date on all reproductions Form Approved - OMB No. 0581-0055 ordance with the Privacy Act of 1974 (5 U.S.C. 552a) and U.S. DEPARTMENT OF AGRICULTURE The following statements are made in a AGRICULTURAL MARKETING SERVICE SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE the Paperwork Reduction Act (PRA) of 1995. Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426). APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE (Instructions and information collection burden statement on reverse) 1. NAME OF OWNER 2. TEMPORARY DESIGNATION OR 3. VARIETY NAME EXPERIMENTAL NAME Monsanto Technology L.L.C. 1325369 None 5. TELEPHONE (include area code) 4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) FOR OFFICIAL USE ONLY PVPO NUMBER (815) 758-9281 3100 Sycamore Road 2003 0 0248 6. FAX (include area code) DeKalb, IL 60115 (815) 758-4106 FILING DATE 7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF 8. IF INCORPORATED, GIVE STATE OF INCORPORATION 9. DATE OF INCORPORATION ORGANIZATION (corporation, partnership, association, etc.) May 12, 2003 August 27, 1999 Corporation Delaware 10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) FILING AND EXAMINATION FEES: \$ 3652.00 DATE 5/12/03 Michael J. Roth Dr. Tim Kain, Patent Scientist 800 N. Lindbergh Blvd. Monsanto Company 8350 Minnegan Road St. Louis, MO Waterman IL 60556 11. TELEPHONE (Include area code) 12. FAX (Include area code) 13. E-MAIL 14. CROP KIND (Common Name) trkain@monsanto.com Fax 815-758-3117 (815) 758-9281 Corn, Field 17. IS THE VARIETY A FIRST GENERATION HYBRID? 15. GENUS AND SPECIES NAME OF CROP 16. FAMILY NAME (Botanical) Zea mays Graminae X_{NO} ☐ YES 19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF 18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED See Section 83(a) of the Plant Variety P. X NO (If "no", go to item 22) a. X Exhibit A. Origin and Breeding History of the Variety ☐ YES (If "yes", answer items 20 and 21 below) Exhibit B. Statement of Distinctness 20. DOES THE OWNER SPECIFY THAT SEED OF THIS \Box □ NO VARIETY BE LIMITED AS TO NUMBER OF CLASSES? Exhibit C. Objective Description of Variety d.

Exhibit D. Additional Description of the Variety (Optional) IF YES, WHICH CLASSES? ☐ FOUNDATION ☐ REGISTERED □ CERTIFIED X Exhibit E. Statement of the Basis of the Owner's Ownership 21. DOES THE OWNER SPECIFY THAT SEED OF THIS □ NO VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? X Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS. g. X Filing and Examination Fee (\$3,652), made payable to "Treasurer of the United ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED States" (Mail to the Plant Variety Protection Office) (If additional explanation is necessary, please use the space indicated on the reverse.) 22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U.S. 23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? OTHER COUNTRIES? X NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE; DISPOSITION, TRANSFER, OR REFERENCE NUMBER: (Please use space indicated on reverse.) FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on rever The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties. SIGNATURE OF OWNER SIGNATURE OF OWNER NAME (Please print or type, NAME (Please print or type) Timothy R. Kain

CAPACITY OR TITLE

Patent Scientist

ST-470 (02-10-2003) designed by the Plant Variety Protection Office using Word 2000. Replaces for

DATE

CAPACITY OR TITLE

INSTRUCTIONS

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (in the sense that it will reproduce an entire plant) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$3,652 (\$432 filing fee and \$3,220 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfiled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. DO NOT use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$432 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

> **Plant Variety Protection Office** Telephone: (301) 504-5518 FAX: (301) 504-5291

Homepage: http://www.ams.usda.gov/science/pvpo/pvp.htm

ITEM

18a. Give:

- (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
 - the details of subsequent stages of selection and multiplication;
 - (3) evidence of uniformity and stability; and
 - (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
 - (1) identify these varieties and state all differences objectively;
 - (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
 - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
- If "Yes" is specified (seed of this variety be sold by variety name only, as a class of certified seed), the applicant MAY NOT reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
- 22. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
- See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.
- 21. CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)
- 22. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

Parent of a hybrid sold in the U.S. - March 2003

23. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center -- East, Beltsville, MD 20705. Telephone: (301) 504-8089. http://www.ams.usda.gov/lsg/seed.htm

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 3.0 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whilten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and

TDD). USDA is an equal opportunity provider and employer.
ST-470 (02-10-2003) designed by the Plant Variety Protection Office with Word 2000. Replaces former versions of ST-470, which are obsolete.

EXHIBIT A (revised)

Origin and Breeding History I325369

Corn Variety l325369 was selected for its better vigor, earlier flowering, better plant health, and greater combining ability.

| Summer 1994 | The inbred line 3IIH6 (a proprietary Monsanto inbred) was crossed to the | | |
|-------------------|--|--|--|
| (Mason, MI) | inbred line 3ISI2* (a proprietary Monsanto inbred). | | |
| Summer 1995 | The S0 seed was grown and self-pollinated. | | |
| Summer 1996 | The S1 seed was grown and self-pollinated in nursery rows G96:109-51 | | |
| (London, ON) | thru G96:109-100. 188 ears were selected. | | |
| Winter 1996-97 | S2 ears were grown ear-to-row and self-pollinated. 3 ears were selected | | |
| (Chile) | in nursery row 579. | | |
| Summer 1997 | S3 ears were grown ear-to-row and self-pollinated. 2 ears were selected | | |
| (London, ON) | in nursery row G97:324-83. | | |
| Summer 1998 | S4 ears were grown ear-to-row and self-pollinated. 2 ears from nursery | | |
| (London, ON) | row G98:421-78 were selected and designated as coded variety I325369. | | |
| Winter 1998-99 | S5 ears were grown ear-to-row and self-pollinated. 9 ears from nursery | | |
| (Hawaii) | rows 6OSS:45-16 through 45-18 were selected. | | |
| Summer 1999 | S6 ears were grown ear-to-row and self-pollinated. 14 ears from nursery | | |
| (London, ON) | rows G99:28-9 and 28-10 were selected. | | |
| Winter 1999-00 | S7 ears were grown ear-to-row and self-pollinated. 20 ears from nursery | | |
| (Puerto Rico) | rows 84SL:40294 through 40312 were selected. | | |
| Summer 2000 | S8 ears were grown ear-to-row and self-pollinated. Final selection was | | |
| (Parkersburg, IA) | completed in nursery rows 5-5 through 5-40. This selection consisted of bulking S9 ears. | | |

^{* -} Inbred 3ISI2 is derived from the inbred line 3IBZ2, a proprietary Monsanto inbred (PVP No. 9100223).

Statement of Stability and Uniformity

Corn variety I325369 was coded in 1998 with final selection made in 2000. This inbred has been reproduced by self pollination for two generations and judged to be stable. Corn vareity I325369 is uniform for all traits observed.

Statement of Variants

Corn variety I325369 shows no variants other than what would normally be expected due to environment or that would occur for almost any character during the course of repeated sexual reproduction.

EXHIBIT B (revised)

Statement of Distinctness

Monsanto Technology L.L.C. believes that corn variety I325369 is most similar to corn variety 3ISI2 (withdrawn PVP application No. 9700164), an inbred developed by Monsanto Technology L.L.C..

Monsanto Technology L.L.C. provides permission that data for the corn variety designated 3ISI2 be made publicly available.

Corn variety I325369 and 3ISI2 differ most significantly in the following traits:

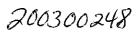
| Trait | 1325369 | 3 S 2 |
|--------------|------------------------|--------------------|
| Anther Color | Yellow (10 Y 8.5/6) | Red (2.5 R 5/8) |
| Silk Color | Yellow (10 Y 8.5/6) | Red (2.5 R 5/8) |

United States Department of Agriculture, Agricultural Marketing Service Science Division, Plant Variety Protection Office National Agricultural Library Building, Room 500 Beltsville, MD 20705

OBJECTIVE DESCRIPTION OF VARIETY CORN (Zea mays L.)

| Name of Applicant(s) Variety Seed So | | | urce | Variety Name or | Temporary Designat | ion |
|---|---|--|----------------------------------|---|--|------------|
| Monsanto Technology L.L.C. | | | | | I325369 | |
| Address (Street & No., or R.F.D. No., City, State, Zip Co | ode and Country) | | | FOR OFFICIAL US | 2 | |
| 3100 Sycamore Road, DeKalb, IL 60115 U.S.A. | | | ļ - | PVPO Number | | |
| | | | | <u> 2003</u> | 300248 | |
| Place the appropriate number that describes the varietal whole numbers by adding leading zeroes if necessary. Cor Traits designated by a '*' are considered necessary for a | characters typi mpleteness shoul an adequate vari | cal of this inbro d be striven for ety description a | ed varie to estal and must | ty in the spaces blish an adequat be completed. | below. Right just e variety descripti | ify on. |
| COLOR CHOICES (Use in conjunction with Munsell color code 01=Light Green 06=Pale Yellow | e to describe al 11=Pink | 1 color choices; | describe | e #25 and #26 in | Comments section): | |
| 02=Medium Green 07=Yellow | 11=Pink 12=Light Red | 16=Pale 1 17=Purple | Purpie e | 21=Buff 22=Tan | | |
| 04=Very Dark Green 09=Salmon | 13=Cherry Red 14=Red | 18=Color! 19=White | less | 23=Brown 24=Bronz | | |
| 05=Green-Yellow 10=Pink-Orange | 15=Red & White | 20=White | | 25=Varie | gated (Describe) (Describe) | |
| STANDARD INBRED CHOICES(Use the most similar (in backgroung Yellow Dent Families: | and and maturity |) of these to make | ke compar | risons based on | grow-out trial data |): |
| Family Members B14 CM105, A632, B64, B68 | Col09, ND | ent (Unrelated): 246, | | Sweet Corn: C13, Iowa5125 | | |
| B37 B37, B76, H84 | Oh7, T2 W117, W | | | Popcorn: | | |
| B73 N192, A679, B73, NC268 C103 Mo17, Va102, Va35, A682 | W182BN | | | | 2, HP301, HP7211 | |
| Oh43 A619, MS71, H99, Va26 WF9 W64A, A554, A654, Pa91 | White Der CI66, H | nt: 105, Ky228 | Pipecorn: Mo15W, Mo16W, Mo24W | | | |
| 1. TYPE: (describe intermediate types in Comments section | on) | | | | | |
| * 2 1=Sweet 2=Dent 3=Flint 4=Flour 5=Pop 6=Orname | ntal 7=Pipecor | a | Standard Inbred Name B37 2 | | | |
| 2. REGION WHERE DEVELOPED IN THE U.S.A.: | | | Standard Seed Source NCRIPS | | | |
| * 2 1=Northwest 2=Northcentral 3=Northeast 4=Southe 6=Southwest 7=Other | ast 5=Southcent | cral | 2 | | TOTAL D | |
| 3. MATURITY (In Region Best Adaptability; show Heat Unit | formula in "Cor | ments" | | | | |
| DAYS HEAT UNITS | | | DAYS 0 8 | | UNITS 8 1, 0 | |
| * 0 6 2 1 2 4 2, 0 From emergence to 50% | | | 0 7 | • | 0 3.3 | |
| * 0 6 2 1 2 4 2.0 From emergence to 50% | of plants in po | ollen | υ. | 3 1 0 | 0 3. 3 | |
| From 10% to 90% poller | n shed | J | | - <u>-</u> - | · - | |
| (*) From 50% silk to optin | mum edible quali | ty | | | | |
| From 50% silk to harvest at 25% moisture | | | | | | |
| 4. PLANT: Sta | andard Deviation | Sample Size | | Standard De | viation Sample Si | ze |
| * 1 5 3.7 cm Plant Height (to tassel tip) | 2.9 | 20 | 2 1 | 1.4 29.5 | 80 | |
| * 0 5 6.6 cm Ear Height (to base of top ear node) | 8.9 | 20 | | 4. 0 11.3 | 80 | |
| 0 1 3.3 cm Length of Top Ear Internode | 1.7 | 20 | | 4.5 1.8 | 80 | |
| Average Number of Tillers | | | | | | |
| * 1. 0 Average Number of Ears per Stalk | 0.0 | 20 | 0 0 | 1. 0 0.0 | 80 | |
| 3 Anthocyanin of Brace Roots: 1=Absent 2=Fain | nt 3=Moderate 4= | Dark | 1 | | | |
| Application Variety Data | Pag | e 1 | Standar | rd Inbred Data | | |

| Application Variety Data | Page | 2 | Standard Inbred Data | | |
|--|--|-------------|-------------------------------|--|--|
| 5. LEAF: | Standard Deviation | Sample Size | Standard Deviation Sample Si | | |
| * 0 0 5.8 cm Width of Ear Node Leaf | 2.3 | 20 | 0 0 9.8 0.8 80 | | |
| * 0 7 3.5 cm Length of Ear Node Leaf | 3.7 | 20 | 0 7 0. 8 7.5 80 | | |
| * 4.8 Number of leaves above top ear | 0.7 | 10 | 6. 0 0.5 40 | | |
| 3 4.0 degrees Leaf Angle | 5.4 | 20 | 2 9. 9 5.9 80 | | |
| (measure from 2nd leaf above ear at | anthesis to stalk abo | ve leaf) | | | |
| * 0 3 Leaf Color (Munsell code 5 GY 3/4) | | | 0 2 (Munsell code 5 GY 4/8) | | |
| 5 Leaf Sheath Pubescence(Rate on scale | | ch fuzz) | 2 | | |
| 5 Marginal Waves (Rate on scale from 1: | | | 6 | | |
| 6 Longitudinal Creases (Rate on scale : | from 1=none to 9=many | | 3 | | |
| 6. TASSEL: | Standard Deviation | Sample Size | Standard Deviation Sample Si | | |
| * 6. 4 Number of Primary Lateral Branches | 2.5 | 20 | 7.5 1.1 80 | | |
| 2 8. 8 Branch Angle from Central Spike | 8.4 | 20 | 3 6. 5 6.6 80 | | |
| * 3 2.0 cm Tassel Length (from top leaf collar to tassel tip) | 4.9 | 20 | 3 5. 5 2.6 80 | | |
| 3. 9 Pollen Shed (Rate on scale from 0=male ste | erile to 9=heavy shed | · . | 6. 7 | | |
| 0 7 Anther Color (Munsell code 10 Y 8.5/6) | | | 1 4 (Munsell code 5 R 5/8) | | |
| 0 2 Glume Color (Munsell code 5 GY 4/8) | | | 0 2 (Munsell code 5 GY 4/8) | | |
| 1 Bar Glumes (Glume Bands): 1=Absent 2=Prese | ent | , | 1 | | |
| 7a. EAR (Unhusked Data): | <u> </u> | | | | |
| | | | 0 5 (Munsell code 2.5 GY 8/6) | | |
| * 0 7 Silk Color (3 days after emergence) (Munsell | | | 0 2 (Munsell code 5 GY 4/8) | | |
| 0 2 Fresh Husk Color (25 days after 50% silking) | | | 2 1 (Munsell code 2.5 Y 8/4) | | |
| 2 1 Dry Husk Color (65 days after 50% Silking) (| | | | | |
| * 3 Position of Ear at Dry Husk Stage: 1=Upright | | ent | 1 | | |
| 4 Husk Tightness (Rate on scale from 1=very lo | | | 5 | | |
| 1 Husk Extension (at harvest): 1=Short (ears e 3 =Long (8-10 cm beyond ear t | <pre>xposed) 2=Medium (<8 ip) 4=Very Long (>10</pre> | cm) | 2 | | |
| | | | | | |
| 7b. EAR (Husked Ear Data): | Standard Deviation | Sample Size | Standard Deviation Sample Siz | | |
| * 1 3.1 cm Ear Length | 0.8 | 10 | 1 3. 3 1.6 40 | | |
| * 3 9.0 mm Ear Diameter at mid-point | 1.6 | 10 | 3 5. 2 3.8 40 | | |
| gm Ear Weight | | | | | |
| * 1 4 Number of Kernel Rows | 2.5 | 10 | 1 2. 2 2.5 40 | | |
| 2 Kernel Rows: 1=Indistinct 2=Distinct | | | | | |
| 1 Row Alignment: 1=Straight 2=Slightly Cu: | | | 2 | | |
| 1 9.3 cm Shank Length | 0.4 | 20 | 0 8. 1 1.6 80 | | |
| 2 Ear Taper: 1=Slight 2=Average 3=Extreme | | | 2 | | |
| Application Variety Data | | | Standard Inbred Data | | |
| Note: Use chart on first page to choose color codes for | r color traits. | | | | |



| Application Variety Data | Page | 3 | Standard Inbred | Data | |
|---|--|--------------|-------------------|------------------|---------------|
| 8. KERNEL (Dried): | Standard Deviation | Sample Size | Stand | dard Deviation | Sample Size |
| 1 0.4 mm Kernel Length | 0.7 | 10 | 0 8.7 | 1.1 | 40 |
| 0 7.6.mm Kernel Width | 0.4 | 10 | 0 7.6 | 0.4 | 40 |
| 0 4.4 mm Kernel Thickness | 0.7 | 10 | 0 5.7 | 1.2 | 40 |
| 2 1.8 % Round Kernels (Shape Grade) | 3.8 | 500g | 6 7.0 | 1.8 | 500g |
| 1 Aleurone Color Pattern: 1=Homozygous 2=S | egregating | | 1 | | - |
| (*) 1 9 Aleurone Color (Munsell code Lighter tha | n 2.5 Y 9/2) | | 1 9 (Munsell o | code Lighter Tha | an 2.5 Y 9/2) |
| * 0 7 Hard Endosperm Color (Munsell code 2.5 Y | 8/10) | ŀ | | code 2.5 Y 8/10) | |
| * 0 3 Endosperm Type: 1=Sweet (sul) 2=Extra Sw 4=High Amylose Starch 5=Waxy Starch 6=H 8=Super Sweet (se) 9=High Oil 10=Other | eet (sh2) 3=Normal Sta igh Protein 7=High Lys | arch sine | 0 3 | | |
| gm Weight per 100 Kernels (unsized sampl | e) | seeds | | | seeds |
| 9. COB; | Standard Deviation | Sample Size | Stand | dard Devaition | Sample Size |
| * 2 2.0 mm Cob Diameter at mid-point | 1.0 | 10 | 2 2.8 | 3.0 | 40 |
| 1 9 Cob Color (Munsell code Lighter than 5 Y | 9/1) | | 1 1 (Munsell c | ode 5 R 6/6) | |
| DISEASE RESISTANCE (Rate from 1 (most susceptible leave blank if not tested; leave Race or Stra |) to 9 (most resistant |); | | | |
| A. Leaf Blights, Wilts, and Local Infection Diseases | in Options blank if po | lygenic): | | | |
| 6 Anthracnose Leaf Blight (Colletotrichum graminico. Common Rust (Puccinia sorghi) Common Smut (Ustilago maydis) 6 Eyespot (Kabatiella zeae) 6 Goss's Wilt (Clavibacter michiganense spp. nebrasi 6 Gray Leaf Spot (Cercospora zeae-maydis) Helminthosporium Leaf Spot (Bipolaris zeicola) Rac 7 Northern Leaf Blight (Exserohilum turcicum) Race 2 6 Southern Leaf Blight (Bipolaris maydis) Race 0 Southern Rust (Puccinia polysora) 6 Stewart's Wilt (Erwinia stewartii) Other (Specify) B. Systemic Diseases 3 Corn Lethal Necrosis (MCMV and MDMV) Head Smut (Sphacelotheca reiliana) Maize Chlorotic Dwarf Virus (MCDV) Maize Chlorotic Dwarf Virus (MCMV) Maize Dwarf Mosaic Virus (MCMV) Maize Dwarf Mosaic Virus (MCMV) Sorghum Downy Mildew of Corn (Peronosclerospora so Other (Specify) C. Stalk Rots Anthracnose Stalk Rot (Colletotrichum graminicola) Diplodia Stalk Rot (Fusarium moniliforme) Gibberella Stalk Rot (Gibberella zeae) Other (Specify) D. Ear and Kernel Rots Aspergillus Ear and Kernel Rot (Aspergillus flavus Diplodia Ear Rot (Stenocarpella maydis) Fusarium Ear and Kernel Rot (Fusarium moniliforme) Gibberella Ear Rot (Gibberella zeae) Other (Specify) | kense) ce | | 7 | | |
| oplication Variety Data | | | | | |
| SPITOGOTON VALLECY DATA | | | Standard Inbred I | Data | |

| 11. INSECT RESISTANCE (Rate from 1 (most susceptible) to 9 (most resistant): leave blank if not tested): Standard Sample Corn Earworm (Helicoverpa zea) Leaf-Feeding Silk Feeding: Corn Leaf Aphid (Rhopalosiphum maidis) Corn Sap Beetle (Carpophilus dimidiatus) Curn Sap Seetle (Sicophilus zeamsize) Salk Tunneling: Curn Sap Seetle (Sicophilus zeamsize) Southers Roctworm (Spadproica undecimpunctata) Southers Roctworm (Spadproica undecimpunctata) Southers Roctworm (Diabrocica undecimpunctata) Southers Roctworm (Diabrocica undecimpunctata) Southers Roctworm (Diabrocica undecimpunctata) Southers Roctworm (Diabrocica virgifera virgifera) Cother (Spacify) 2. AGRONOMIC TRAITS: 4 Stay Green (at 65 days after anthesis) (Rate on a scale from 1-worst to 9-excellent.) 0 0.0 % Propopod Zars (at 65 days after anthesis) 0 0.0 0 0 0 0 % Pre-anthesis Roct Lodging 0 1.7 % Post-anthesis Roct Lodging 1.7 % Post-anthesis Roct Lodging (at 65 days after anthesis) 2 6 5 9.7 3. MOLECULAR MARKERS: (0-data unavailable; I-data available but not supplied; 2-data supplied) | Application Variety Data | Pag | je 4 | Standard Inbre | ed Data | |
|---|---|---------------------|-----------------|----------------|---------|--|
| Banks Grass Mite (Oligonychus pratensis) Corn Earworm (Heliotoverpa zea) Leaf-Feeding Silk Feeding: | <pre>11. INSECT RESISTANCE (Rate from 1 (most susceptible)</pre> | to 9 (most resistar | nt); | | | |
| Ear Damage Corn Leaf Aphid (Rhopalosiphum maidis) Corn Sap Beetle (Carpophilus dimidiatus) European Corn Borer (Ostrinia nubilalis) 1 2nd Generation (Typically Whorl Leaf Feeding) 1 2nd Generation (Typically Leaf Sheath-Collar Feeding) Stalk Tunneling: Stalk Tunneling: mt tunneled/plant Fall Armyworn (Specdopters frugiperda) Leaf-Feeding Silk-Feeding Silk-Feeding Southern Rootworn (Diabrotica barberi) Southern Rootworn (Diabrotica barberi) Southern Rootworn (Diabrotica barberi) Southern Rootworn (Diabrotica undecimpunctata) Southwestern Corn Sover (Diatrotica bardoni) Leaf Feeding Stalk Tunneling: — tunneled/plant Two-spotted Spider Mite (Tetranychus urticae) Western Rootworn (Diabrotica virgifera virgifera) Other (Specify) 2. AGRONOMIC TRAITS: 4 Stay Green (at 65 days after anthesis) (Rate on a scale from 1=worst to 9=excellent.) 0 0.0 % Pre-anthesis Brittle Snapping 0 0.0 % Pre-anthesis Root Lodging 1 0 0.0 % Pre-anthesis Root Lodging (at 65 days after anthesis) 0 0.0 % Pre-anthesis Root Lodging (at 65 days after anthesis) 0 2.8 6 7 6.2 Kg/ha Yield of Inbred Per Se (at 12-13% grain moisture) 2 MOLECULAR MARKERS: (0=data unavailable; 1=data available but not supplied; 2=data supplied) | Corn Earworm (Helicoverpa zea) Leaf-Feeding | | | | | |
| Fall Armyworm (Spodopfera frugiperda) Leaf-Feeding : | Ear Damage Corn Leaf Aphid (Rhopalosiphum maidis) Corn Sap Beetle (Carpophilus dimidiatus) European Corn Borer (Ostrinia nubilalis) 1 1 2nd Generation (Typically Whorl Leaf Feeding) Stalk Tunneling: | ding) | | · | | |
| Northern Rootworm (Diabrotica barberi) Southwestern Corn Borer (Diatraea grandiosella) Leaf Feeding Stalk Tunneling: cm tunneled/plant Two-spotted Spider Mite (Tetranychus urticae) Western Rootworm (Diabrotica virgifera virgifera) Other (Specify) 2. AGRONOMIC TRAITS: 4 Stay Green (at 65 days after anthesis) (Rate on a scale from 1=worst to 9=excellent.) 0 0.0 % Dropped Ears (at 65 days after anthesis) 0 0.0 0 0.0 % Pre-anthesis Brittle Snapping 0 0.0 0 1.7 % Post-anthesis Root Lodging (at 65 days after anthesis) 0 2.8 6 7 6.2 Kg/ha Yield of Inbred Per Se (at 12-13% grain moisture) 2 = data supplied; 2=data supplied) | Fall Armyworm (Spodoptera frugiperda) Leaf-Feeding | | | | | |
| Stalk Tunneling: Two-spotted Spider Mite (Tetranychus urticae) Western Rootworm (Diabrotica virgifera virgifera) Other (Specify) 2. AGRONOMIC TRAITS: 4 Stay Green (at 65 days after anthesis) (Rate on a scale from 1=worst to 9=excellent.) 0 0.0 % Dropped Ears (at 65 days after anthesis) 0 0.0 % Pre-anthesis Brittle Snapping 0 0.0 % Pre-anthesis Root Lodging 0 1.7 % Post-anthesis Root Lodging (at 65 days after anthesis) 0 2.8 6 7 6.2 Kg/ha Yield of Inbred Per Se (at 12-13% grain moisture) 2 data supplied) | <pre>Northern Rootworm (Diabrotica barberi) Southern Rootworm (Diabrotica undecimpunctata) Southwestern Corn Borer (Diatraea grandiosella)</pre> | | | | | |
| 4 Stay Green (at 65 days after anthesis) (Rate on a scale from 1=worst to 9=excellent.) 0 0.0 % Dropped Ears (at 65 days after anthesis) 0 0.0 % Pre-anthesis Brittle Snapping 0 0.0 % Pre-anthesis Root Lodging 0 1.7 % Post-anthesis Root Lodging (at 65 days after anthesis) 0 2.8 6 7 6.2 Kg/ha Yield of Inbred Per Se (at 12-13% grain moisture) 2 6 5 9.7 3. MOLECULAR MARKERS: (0=data unavailable; 1=data available but not supplied; 2=data supplied) | Stalk Tunneling: _ cm tunneled/plant _ Two-spotted Spider Mite (Tetranychus urticae) Western Rootworm (Diabrotica virgifera virgifera) | | | | | |
| 10 9-excellent.) 0 0.0 % Dropped Ears (at 65 days after anthesis) 0 0.0 % Pre-anthesis Brittle Snapping 0 0.0 % Pre-anthesis Root Lodging 0 1.7 % Post-anthesis Root Lodging (at 65 days after anthesis) 0 2.8 6 7 6.2 Kg/ha Yield of Inbred Per Se (at 12-13% grain moisture) 2 6 5 9.7 3. MOLECULAR MARKERS: (0=data unavailable; 1=data available but not supplied; 2=data supplied) | 2. AGRONOMIC TRAITS: | | | | | |
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| 0 0.0 % Pre-anthesis Root Lodging 0 1.7 % Post-anthesis Root Lodging (at 65 days after anthesis) 0 2.8 6 7 6.2 Kg/ha Yield of Inbred Per Se (at 12-13% grain moisture) 2 6 5 9.7 3. MOLECULAR MARKERS: (0=data unavailable; 1=data available but not supplied; 2=data supplied) | | | | | • | |
| 0 1. 7 % Post-anthesis Root Lodging (at 65 days after anthesis) 0 2. 8 6 7 6. 2 Kg/ha Yield of Inbred Per Se (at 12-13% grain moisture) 2 6 5 9. 7 3. MOLECULAR MARKERS: (0=data unavailable; 1=data available but not supplied; 2=data supplied) | | | | | | |
| 6 7 6. 2 Kg/ha Yield of Inbred Per Se (at 12-13% grain moisture) 2 6 5 9. 7 3. MOLECULAR MARKERS: (0=data unavailable; 1=data available but not supplied; 2=data supplied) | | | | | | |
| 3. MOLECULAR MARKERS: (0=data unavailable; 1=data available but not supplied; 2=data supplied) | | | | | | |
| | | | | | | |
| | <pre>0 Isozymes</pre> | lable but not supp. | lied; 2=data su | upplied) | | |

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COMMENTS (eg. state how heat units were calculated, standard inbred seed source, and/or where data was collected. Continue in Exhibit D):

Heat Unit Calculation: GDU = Daily Max Temp ($\leq 86^{\circ}$ F) + Daily Min Temp ($\geq 50^{\circ}$ F) - 50° F

EXHIBIT C: Objective Description of the Variety

Following is a description of the experimental and environmental conditions by which the trials were conducted along with influences that my have contributed to the variability of the traits:

The corn varieties 'I325369, '3ISI2' and 'B37' were grown at the Waterman, IL observation nursery in years 2000-2001. The varieties 'I325369 and '3ISI2' were planted in 2 row plots with 15 plants per row in each of the two years. Trait data were collected on 10 random representative plants for most traits, usually quantitative from each 2 row plot. Data on qualitative traits are usually collected on 5 plants from each 2 row plot. Variety 'B37' was planted in four 2 row plots in 2000 and 2001 with trait data collected as listed above. For Exhibit C all data were pooled and reported as means across the two years with standard deviation.

The varieties are randomly planted in a 4.5 acre observation nursery which is located within a larger 18 acre field. Besides the observation nursery, this field consists of a research seed increase nursery and an IP seed inventory nursery. The location of each of these individual nurseries is rotated each year to a different location within the 18 acre field. Therefore subject inbreds are not planted adjacent to comparative or standard varieties and may be located in different areas of the larger field each year, therefore being influenced by spacial differences within the field. Growing conditions within the field are not uniform as there are some slight topographical variations such as lower areas which may accumulate and retain water or higher areas which are usually drier. The field is tiled and therefore a variety maybe planted close to a tile line while a comparative variety maybe planted further away and in a low spot within the field. Temporal varieties can exist as weather conditions from year to year can vary as well as planting dates can vary from year to year based on weather conditions. Weather conditions each year can vary the maturity rate of the varieties due to either favorable or unfavorable growing conditions. Trait variability is not observed for each variety within its own test plot-plants are usually uniform and data are collected on the "most" representative plants- variability occurs due to spacial location of the test plot for that variety from year to year and to the temporal variation of weather conditions from year to year during the 2 years data are collected.

Exhibit D

100mm - 10 概要进入T

Waterman Research Station Monthly Weather Data 1999-2001

| Date | Average | Ave. Monthly | Ave. Monthly | Ave. Monthly | Ave. Monthly |
|-------------|---------|--------------|--------------|--------------|--------------|
| | Precip. | Temp- Max. | Temp- Min | Rel. Humid | Rel. Humid |
| | (mm) | (F°) | (F°) | Max (%) | Min (%) |
| June 1999 | 5.8 | 78.4 | 58.7 | - | _ |
| July 1999 | 2.7 | 80.4 | 61.6 | - | - |
| August 1999 | 1.2 | 80.0 | 62.3 | _ | _ |
| Sept 1999 | 3.6 | 73.7 | 57.3 | _ | _ |
| June 2000 | 6.5 | 76.6 | 56.5 | 92.3 | 50.7 |
| July 2000 | 3.6 | 80.2 | 60.1 | 93.3 | 56.9 |
| August 2000 | 3.8 | 81.3 | 60.3 | 95.0 | 56.3 |
| Sept 2000 | 3.9 | 75.7 | 51.4 | 91.4 | 45.4 |
| June 2001 | 3.2 | 77.2 | 56.5 | 93.2 | 48.8 |
| July 2001 | 1.4 | 84.9 | 62.2 | 93.9 | 47.1 |
| August 2001 | 2.4 | 82.9 | 61.3 | 96.8 | 55.8 |
| Sept 2001 | 4.9 | 71.4 | 48.7 | 95.4 | 50.9 |

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| 1. NAME OF APPLICANT(S) | 2. TEMPORARY DESIGNATION | 3. VARIETY NAME |
| Monsanto Technology L.L.C. | OR EXPERIMENTAL NUMBER | 1325369 |
| 4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) | 5. TELEPHONE (Include area code) | 6. FAX (Include area code) |
| 3100 Sycamore Road DeKalb, IL | (815) 758-9281 | (815) 758-3711 |
| 60115 | 7. PVPO NUMBER | 161 |
| 8. Does the applicant own all rights to the variety? Mark an "X" in the | | 200300248 |
| 9. Is the applicant (individual or company) a U.S. national or a U.S. b | | |
| | | |
| 10. Is the applicant the original owner? | NO If no, please answer one | of the following: |
| a. If the original rights to variety were owned by individual(s), is | (are) the original owner(s) a U.S. Nation NO If no, give name of count | |
| b. If the original rights to variety were owned by a company(ies) YES 11. Additional explanation on ownership (Trace ownership from original rights) | NO If no, give name of count | y . |
| Corn Variety I326369 was originated and developed by a breeder Monsanto Technology L.L.C. and the breeder, all rights to any in L.L.C. No rights to such invention, discovery or development are | vention, discovery or development are | .L.C. By agreement between assogned to Monsanto Technology |
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| | | |
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| If the rights to the variety are owned by the original breeder, that penational of a country which affords similar protection to nationals or | erson must be a U.S. national, national f the U.S. for the same genus and speci | of a UPOV member country, or es. |
| 2. If the rights to the variety are owned by the company which employ nationals of a UPOV member country, or owned by nationals of a genus and species. | yed the original breeder(s), the company country which affords similar protection i | must be U.S. based, owned by onationals of the U.S. for the same |
| 3. If the applicant is an owner who is not the original owner, both the | original owner and the applicant must m | eet one of the above criteria. |
| The original breeder/owner may be the individual or company who dis Act for definitions. | rected the final breeding. See Section 4 | 1(a)(2) of the Plant Variety Protection |
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